

REMARKS

This is in response to the non-final Official Action currently outstanding with regard to the present application.

Claims 1-29 were pending in this application at the time of the issuance of the currently outstanding Official Action. By the foregoing Amendment, Applicants have canceled Claims 1-29, without prejudice, and have added new Claims 30-42. No claims have been withdrawn. Accordingly, new Claims 30-42 will constitute the Claims under active prosecution in this application upon the entry of the foregoing Amendment.

The claims of this application are reproduced above including appropriate status identifiers for convenience of reference as required by the Rules.

More particularly, in the currently outstanding Official Action the Examiner has:

1. Acknowledged Applicants' claim for foreign priority under 35 USC §119 (a)-(d) or (f), and confirmed the receipt of the required copies of the priority documents by the United States Patent and Trademark Office;
2. Failed to indicate whether or not the drawings filed as part of this application on 3 September 2004 have been accepted – **Applicants respectfully request an indication from the Examiner regarding the acceptability of the drawings in response to this communication;**

3. Provided Applicants with copies of the Forms PTO-1449/PTO/SB/08a/b that accompanied their Information Disclosure Statements filed with this application and on 10 January 2007 duly signed, dated and initialed in confirmation of the consideration of the documents listed therein, but failed to similarly acknowledge Applicant's Information Disclosure Statement of 3 May 2007 –
Acknowledgement of Applicant's Information Disclosure Statement of 3 May 2007 in response to this communication is respectfully requested;
4. Provided Applicant with a Notice of References Cited (Form PTO/892) and confirmed the receipt and entry of the two Preliminary Amendments filed in this application;
5. Provisionally rejected all of the presently pending claims, i.e., Claims 1-29, on the grounds of nonstatutory obviousness-type double patenting as being unpatentable over Claims 1-18 of US Patent Application Serial No. 10/713,349 and Claims 1-30 of US Patent Application No. 10/804,328. Specifically, the Examiner asserts that the claims of this application are broad enough to cover the subject matter claimed in both of the above-mentioned US Patent Applications.
6. Rejected Claims 1-29 under 35 USC 102(b) as being anticipated by either the Moriya et al reference (US Patent 5,610,879) or the Japanese Patent Publication No. 2001-084643 (cited in the Information Disclosure Statement that accompanied this application).

No further comment regarding items 1-4 above is deemed to be required in these Remarks.

With regard to item 5 above, Applicants respectfully direct the Examiner's attention to the foregoing Amendment wherein Claims 1-29 have been canceled, without prejudice, and New Claims 30-42 have been added. Further, Applicants respectfully direct attention to the fact that New Claims 30-42 clearly and distinctly set forth both the various component layers of the layered structure being claimed and their location relative to the substrate and one another as well as the materials utilized in the formation of the temperature-sensitive layer of the claimed optical information recording medium. In addition, the thickness of the temperature-sensitive layer is set forth in the above new claims as is the fact that the temperature-sensitive layer may be composed of multiple layers of temperature-sensitive material respectively separated by layers of an intermediate material. Finally, the new method claims deal with the creation of high-temperature and low-temperature regions within the temperature sensitive layer are clearly and specifically tied to the apparatus claims of this application in that the method includes as one of its steps the provision of one of the optical information recording mediums as herein claimed.

In view of these amendments, Applicants respectfully submit that the Examiner's provisional obviousness-type double patenting rejections are now moot. Specifically, Applicants respectfully submit that New Claims 30-42 set forth hereinabove clearly deal with a different structures than the structures disclosed and claimed in either USSN 10/713349 or USSN 10/804328.

Indeed, Applicants respectfully submit that unlike previous Claims 1-29 (now canceled, without prejudice) there can be no question that the wording of New Claims 30-42 is not such as to cover the structures of the above-referenced United States Patent Applications. Thus, Applicants further respectfully submit that the foregoing argument is clearly supported by the facts that the applications cited by the Examiner deal variously with a temperature responsive layer alone, a temperature responsive layer in combination with an absorption layer, a temperature responsive layer in combination with a reflective layer, and a temperature responsive layer in combination with a reflective layer and a recording layer (the order of stacking of the reflective layer and the temperature responsive layer on the one hand and the reflective layer, the recording layer and the temperature responsive layer on the other hand relative to the side of the associated substrate opposite to the reproduction light incident side thereof being the reverse of that herein claimed). Hence, Applicants respectfully submit that New Claims 30-42 presented hereinabove are not so broad as to read on the claims of the applications to which the Examiner has drawn attention in the currently outstanding Official Action.

In view of the foregoing situation, Applicants respectfully submit that the Examiner's obviousness-type double patenting rejection no longer has any possible support in the present claims of this application (i.e., New Claims 30-42 presented hereinabove). In these circumstances, Applicants respectfully conclude that the currently outstanding obviousness-type double patenting rejection has been rendered moot by the present amendment and respectfully request that the same be withdrawn in response to this communication.

With regard to item 6, Applicants respectfully point out that the New Claims 30-42 presented above clarify the nature of layered structure of the present invention and the materials of which the temperature-sensitive layer of the claimed medium is to be made in a manner that is clearly and definitely distinct from the art upon which the Examiner has relied. Further, support for the foregoing New Claims 30-42 may be found in the present specification as follows:

Claim 30 is supported at page 11, line 14; page 21, lines 9 to 15; and in FIG. 1

Claim 31 is supported at page 8, line 23 to page 9, line 2

Claim 32 is supported at page 9, lines 2 to 6

Claim 33 is supported at page 9, lines 6 to 10

Claims 34 to 37 and similar are supported at page 11, lines 6 to 8

Claim 38 and the like are supported at page 13, lines 6 to 12; and at page 18,
line 24 to page 19, line 16

Claim 40 and the like are supported by original method claim 8

Applicants further note with regard to item 6 above, that the Japanese reference to which the Examiner refers appears to disclose a reflection addition layer on the light incident surface of the substrate with a protective layer formed thereon. Further, in the Japanese reference it appears that a temperature sensitive layer of Co_3O_4 is formed on the protective layer with a heat holding layer formed on the temperature sensitive layer and a reflective layer formed on the heat holding layer. This is not the same as any of the presently claimed structures and the material of the temperature sensitive layer disclosed in the Japanese reference is distinct from that claimed hereinabove.

More specifically, the JP '643 publication (that corresponds to US Patent No. 6,524,766) discloses the constituent materials of the various layers stacked on the substrate. Thus, it will be seen that the JP '643 publication discloses laminating a reflecting film (Al-Ti film), a heat retaining film (ZnS-SiO₂ film), an inorganic super-resolution film (Co₃O₄ film), a substrate protecting film (ZnS- SiO₂ film), and a reflection imparting film (Ge-N film), in that order, on a reproduction light incident side of a substrate (paragraph [0046]) that contains "phase pits".

The JP '643 publication also discloses: at least one thin film (inorganic super-resolution film), made of Co-containing oxide, formed in the plurality of films of the lamination film; a Ge, Si, and N-containing thin film formed between the substrate and the thin film made of Co-containing oxide; and an Au, Ag, and Al-containing thin film *formed between the substrate and the thin film made of Co-containing oxide* (claims 6-9). The publication further discloses that, other than the thin film made of Co-containing oxide, an inorganic super-resolution film may be used that includes either oxides, nitrides, sulfides, fluorides, or carbides of different elements having a plurality of compounds (paragraph [0028]).

The JP '643 publication also discloses that the inorganic super-resolution film is made of an oxide including at least one kind of element such as, for example, Co, Fe, Ni, Cu, Ag, and V (paragraph [0037], Col. 9, lines 33-38 of U.S. Patent 6,524,766). It is also disclosed that two ZnS-SiO₂ films are formed so as to sandwich the thin film made of Co-containing oxide (paragraph [0027]).

Nevertheless, the publication does not disclose or suggest anything about a temperature responsive layer including a CeO₂ or ZnO as now specified in the new claims added by the foregoing Amendment.

Accordingly, Applicants respectfully submit that the Japanese reference to which the Examiner has referred does not show all of the elements of the present invention cooperating together in the manner herein claimed. Hence, Applicants respectfully submit that the Examiner has not established a case that is sufficient to anticipate the new claims presented hereinabove based upon the cited Japanese reference. A decision so holding in response to this communication is respectfully requested.

The situation with regard to the Moriya reference is somewhat different. In Claim 5 of the Moriya reference a substrate having a temperature sensitive layer formed on its light incident surface is disclosed as having a reflective layer formed thereon. However, the materials disclosed by the Moriya reference for the formation of the temperature sensitive (“thermo-sensitive”) layer are disclosed to be phase change materials containing Te, Sb and Ge as main components, or Sb and Sn as main components, or Te, Ge and Sn as main components, or In and Se as main components, or In and Sb as main components sandwiched between dielectric layers (see Moriya at Col. 8, lines 6-38 and Col. 11, Example 2). These materials are clearly different from the materials herein claimed for the temperature sensitive layer, i.e., CeO_2 or ZnO .

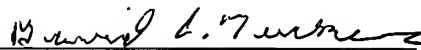
In addition, when the present claims discuss a so-called “phase changing material”, that material is flanked by layers of dielectric material as is the thermo-sensitive material in the Moriya reference. Hence, Applicants respectfully submit that in the Moriya structure the so-called “phase change” material is the equivalent of the temperature sensitive material herein claimed and different from the “phase change” material contemplated by the present invention. Accordingly, Applicants respectfully submit that the Moriya reference is not sufficient to establish an anticipation of the present invention. Specifically, Applicants respectfully submit that the Moriya reference simply does not disclose all of the elements of the present invention cooperating together in the same manner as hereinabove claimed.

Accordingly, Applicants respectfully submit that the New Claims presented hereinabove should not subject to the obviousness-type double patenting rejection stated by the Examiner against Claims 1-29 (now canceled, without prejudice). Further, Applicants respectfully submit that neither of the references cited by the Examiner as anticipating Claims 1-29 (now canceled, without prejudice) is sufficient to disclose the present invention as now claimed in New Claims 30-42. A decision so holding in response to this communication also is respectfully requested.

Finally, Applicants also believe that additional fees beyond those submitted herewith are not required in connection with the consideration of this response to the currently outstanding Official Action. However, if for any reason a fee is required, a fee paid is inadequate or credit is owed for any excess fee paid, you are hereby authorized and requested to charge and/or credit Deposit Account No. 04-1105, as necessary, for the correct payment of all fees which may be due in connection with the filing and consideration of this communication.

Respectfully submitted,

Date: August 27, 2007


SIGNATURE OF PRACTITIONER

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